

**REMARKS**

In the Office Action mailed September 30, 2005 (hereinafter, the "Office Action"), Claims 1-30 were pending for consideration with claims 1-8 and 26-30 being withdrawn from consideration. Of these, Claims 14 and 15 were rejected under 35 U.S.C. 112 as being confusing and not further limiting the claims. Claims 9-25 were rejected as being allegedly obvious under 35 U.S.C. §103(a) over Tuttle (US 3,896,252) in combination with Miller (US 4,668,533). Each of these rejections is addressed in turn below.

By the present amendment, Claim 9 has been amended to state that the second composition can be printed prior to or after the first ink-jettable composition. Support for this amendment can be found at page 2, line 30 through page 3, line 1 and originally filed claim 28. No new matter is added by this amendment. Further, it should be noted that such amendment has been made merely to advance prosecution and is not considered a narrowing amendment. Accordingly, Claims 1-30 remain pending for consideration in the present application with Claims 1-8 and 26-30 being withdrawn from consideration. Reconsideration of Claims 9-25 is respectfully requested.

**Rejection Under 35 U.S.C. § 112**

The Examiner has rejected Claim 14 as confusing and Claim 15 as not being further limiting. The amendment to Claim 9 is intended to resolve this confusion. Specifically, the removal of "predetermined pattern" in clause (a) and statement that the second composition can be overprinted or underprinted makes it clear that the order of printing each ink can be varied. In other words, the "predetermined pattern" is now not introduced into the claim until both the first and second ink-

jettable compositions are applied (by overprinting or underprinting the second composition), thus removing the basis of the Examiners rejection under this section. Applicant requests that this rejection be withdrawn.

**Rejection Under 35 U.S.C. § 103(a)**

Claims 9-25 were rejected as being allegedly obvious over Tuttle in combination with Miller. Applicant respectfully submits that the rejected claims are patentable over the cited references for the reasons set forth below, and requests that the rejections be withdrawn.

Before discussing the § 103 rejections, it is thought proper to briefly state what is required to sustain such a rejection. The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. "The PTO has the burden under § 103 to establish a *prima facie* case of obviousness."

In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). To satisfy this burden, the PTO must meet the criteria set out in M.P.E.P. § 706.02(j):

... three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

With the above background in mind, the rejections under 35 U.S.C. § 103 will be discussed. Applicant contends that the cited references fail to make a *prima facie* case of obviousness in that: i) it has failed to show motivation to modify or combine the cited references; and ii) that the cited references fail to teach or suggest all of the claim limitations of Applicant's invention.

As a general observation, the combination of Tuttle and Miller requires at least five (5) separate modifications or steps to arrive at the invention claimed by the Applicant. Specifically, first, the combination of these references must first be made based on some motivation. Second, the particular classes of materials must be chosen from among the many identified alternatives. Third, the specific teaching of Tuttle must be modified to arrive at a single “palladium aliphatic amine complex.” Fourth, this modified complex must be further modified such that it is made ink-jettable. Fifth, these modified compositions being applied to the substrate are then heated. None of these steps is taught, suggested, or would be motivated by the teachings of either reference.

More specifically, the Tuttle reference fails to supply a motivation to combine its teachings with any non-coating related references, much less an ink-jet reference such as Miller. Almost all inventions are combinations or variations of previously known materials or steps; however, not all such combinations are appropriate. The Tuttle reference is related to processes for forming metal plating on plastics. See Title and col. 1. The entire disclosure of Tuttle refers to achieving uniform coatings of metal over an entire surface of plastic materials. It is well known in the industry that such metallization of plastics is used for decorative or film barrier applications and can include aesthetic effects such as decoration, shimmer, etc., barriers to permeation of gases or liquids through the material and the like. This is illustrated by the fact that the disclosure and examples all teach immersion plating baths to achieve the stated metal coatings. See col. 4, lines 11-17. Those skilled in the art would fail to find any motivation to use the teachings of Tuttle in an ink-jet environment. Coatings of large surface areas versus printing of features such as electrical circuits are significantly

different matters and endeavors. For example, ink jetting to achieve a solid coating would be a highly inefficient process, so much so that the subject matter of the Tuttle patent would not lead someone to ink jet printing of small features and patterns such as printed circuits. In fact, such desires for coating large areas would lead someone skilled in the art away from ink-jet or most other printing technologies.

Further, the Tuttle patent provides an apparently improved manner in which such electroplating can be performed on plastic materials. However, the plastic materials require special preparation. Specifically, Tuttle states that "essential to the invention is the use of a rubber modified thermoplastic polymer...[otherwise] the benefits of this invention are not obtained." Col. 2, lines 14-19. The substrates of the present invention do not require any such special formulation. Substantial adhesion to the substrate is not necessarily required in the claimed invention. Therefore, those skilled in the art would not be motivated to consider such a process or its materials in ink-jet printing.

Assuming that the combination of Tuttle and Miller were appropriate, which point we do not concede, the combination would still fail to render the claimed invention obvious. Tuttle fails to provide a motivation to modify the compositions in the manner claimed by the Applicant. Specifically, as a second step, one must choose from among the many components listed to arrive at an aliphatic amine aminating solution and a separate noble metal salt solution, i.e. palladium chloride. This requires choosing the palladium salt from among a list of alternatives and an aliphatic amine which would complex with the palladium cation.

Assuming that the above step can be made, which point we do not agree, a third step of combining the aminating solution and palladium metal salt would be required. As mentioned before, the claimed invention requires a "palladium aliphatic amine complex" as an ingredient in the ink-jettable composition, i.e. prior to deposition on the substrate. Applicant recognizes the Examiner's statement regarding a reasonable expectation of success. However, Applicant asserts that the Tuttle reference specifically teaches separate steps due to the fact that the substrate is specially prepared. Thus, the aminating solution is designed to react with and improve adherence to the substrate. The presence of a metal cation such as palladium would interfere with this by complexing or otherwise associating with the amine components. Without this separate step, adherence would be reduced and the stated objectives of improving adherence would be impeded. Thus, the Tuttle reference would be incompatible with the suggestion that the aminating solution be combined with the metal salt prior to deposition for at least the reason that the aminating solution would no longer react with the substrate in the same manner. No such modification would be suggested nor would one skilled in the art be motivated to modify the disclosed separate treatment solutions in such a manner.

As a fourth step, the above modified solutions would then need to be made ink-jettable. As asserted above, the Tuttle reference teaches away from such a modification. There is no motivation provided in Miller to retain the amine component when formulating an ink-jet composition, especially since such is taught as a separate solution from the palladium component in the Tuttle reference.

Fifth, the compositions applied to the substrate must then be heated in accordance with the

claimed invention. Neither Tuttle nor Miller teaches or suggests such a heating step. Each reference teaches that, for their respective purposes, satisfactory results are achieved with no mention of heating. Although the Examiner has asserted that similar success would be expected with heating, the Applicant disagrees with this assessment. Regardless, the addition of heating is only one of at least five steps required to arrive at the claimed invention through combination and modification of the cited references.

In light of the above comments, Applicant respectfully submits there is no suggestion or motivation to combine and modify the Tuttle and Miller references in a manner sufficient to arrive at the claimed invention. As such, a *prima facie* case necessary to support a § 103 rejection was not established. Accordingly, Applicant respectfully requests that the rejections be withdrawn and the claims be passed to issue.

#### **CONCLUSION**

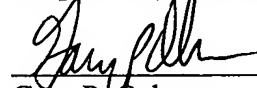
In view of the foregoing, Applicant believes that Claims 9-25 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be resolved during a telephone interview, the Examiner is invited to telephone Don Coulman at (541) 715-1694 to address such issues as expeditiously as possible.

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Dated this 20<sup>th</sup> day of December, 2005.

Respectfully submitted,



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